## CLAIMS:

- 1. A method for treating cancer, comprising determining a therapeutically effective dosage amount of arsenic trioxide based upon the weight of a patient diagnosed with said cancer, and administering said therapeutically effective dosage amount to said patient.
- 2. The method of Claim 1, wherein said cancer is a hematological cancer.
- 3. The method of Claim 1, wherein said cancer is a leukemia.
- 4. A method for determining a dose of arsenic trioxide to treat cancer, comprising determining the weight of a patient diagnosed with cancer and determining a therapeutically effective dosage amount of said arsenic trioxide based upon the weight of said patient.
- 5. The method of claim 4, wherein said cancer is a hematological cancer.
- 6. The method of claim 4, wherein said cancer is a leukemia.
- 7. A kit comprising arsenic trioxide and instructions for treating a patient diagnosed with cancer comprising determining a therapeutically effective dosage amount of said arsenic trioxide based upon the weight of said patient.
- 8. The kit of claim 7, wherein said instructions further define the cancer as a hematological cancer.
- 9. The kit of claim 7, wherein said instructions further define the cancer as a leukemia.